

MEMORANDUM FOR: Monterey Bay National Marine Sanctuary Advisory Council

FROM: Paul Michel, Superintendent

SUBJECT: Proposed PG&E Seismic Survey Project

In preparation for the October 18 SAC meeting in Cambria and the agenda item regarding the proposed PG&E Seismic Surveys, I have prepared the following summary for your information.

PG&E and the National Science Foundation (NSF) are proposing to conduct a high energy seismic survey in the vicinity of the Diablo Canyon power plant and known offshore fault zones. PG&E's seismic research was called for by the state and includes the use of on-shore and off-shore low and high-energy seismic studies, as well as the installation of ocean-bottom sensors to detect seismic activity. The data will provide a more accurate and detailed picture of the region's complex geology, and will help further define the level of seismic activity in the region of Diablo Canyon. PG&E will use this data to support its ongoing seismic safety program.

NOAA is reviewing federal and state environmental documents regarding potential biological impacts from marine seismic tests on whales and other federally protected species. The agency will determine if the project can be conducted in a manner compliant with federal natural resource protection laws, which include the Marine Mammal Protection Act, the Endangered Species Act, the Magnuson Stevens Fisheries Act, and the National Marine Sanctuaries Act. The proposed survey would occur south of the boundary of the Monterey Bay National Marine Sanctuary and models used to estimate potential impacts to marine life predict that the intensity of sound reaching the southern boundary of the sanctuary would likely not be high enough to affect sanctuary resources, based on threshold values used by NOAA. However, levels within the sanctuary are predicted to approach these thresholds, leading to interest in validation of model predictions and in comprehensive monitoring of sound levels and marine mammal distributions and densities before, during and after the survey.

The National Science Foundation (NSF), which prepared the NEPA document and plans to carry out the surveys using their research vessel (in partnership with PG&E), has committed to complete a "source verification phase" prior to beginning the survey. This phase is designed to measure the actual level of underwater sonification that occurs to determine whether these values match those predicted by models. This will help determine whether predictions that sanctuary resources are unlikely to be affected by the survey are accurate.

Regardless of the outcome of this verification phase, NOAA has asserted that should the proposed project go forward, the need for impacts analysis to sanctuary resources be addressed within the comprehensive mitigation and monitoring plans funded by PG&E. As the sanctuary's concerns relate to the impacts of sound on marine mammal and fish species, they overlap with NOAA Fisheries' concerns and thus several line offices within NOAA have worked collectively to identify and recommend appropriate mitigation and monitoring. These plans include fishery resource assessments south of the sanctuary, shoreline stranding response spanning the survey area and inclusive of the southern sanctuary, aerial survey efforts targeting both large whales and smaller coastal populations (sea otters and harbor porpoises), and "listening" based monitoring which uses three types of passive acoustic technologies. Two forms of passive acoustic monitoring will focus mainly on monitoring the behavior of inshore populations of concern, sea otters and harbor porpoises in particular, south of the sanctuary and central to the seismic survey area. However, one listening station for these systems will be placed in the southern sanctuary. A final form of passive acoustic monitoring will focus on the offshore levels of sound from the seismic surveys and detection of large whales in the sanctuary, with an additional listening station further south.

Currently, PG&E is seeking approval from the California Coastal Commission for its revised seismic survey focused on the area referred to as "Box #4" (PG&E had planned to conduct testing this fall in two of the four "boxes" or zones outlined on the project map. Now it only plans to survey Box 4 off the coast of Morro Bay, postponing the testing in Box 2, which ranges from Morro Bay to northern Santa Barbara County).

The Commission intends to consider this item at its November 14 meeting in Santa Monica. The utility company had planned to begin seismic testing offshore of Diablo Canyon nuclear power plant in early November, but now it must wait until the conclusion of its mid-November hearing before the Coastal Commission — if the permit application is approved.

PG&E also is seeking a permit from NMFS.

Seismic Survey Process





